

CLEAN CLAIMS PENDING AFTER THIS AMENDMENT:

1. A method for providing bandwidth to access response messages, comprising the steps of:

analyzing a number of access response messages;

determining whether the number of access response messages awaiting transmission meets a predetermined criterion; and

if so,

diverting at least one paging message.

2. The method according to Claim 1, wherein said step of determining whether said access response message situation meets a predetermined criterion comprises the step of determining whether said number exceeds a predetermined threshold.

4. The method according to Claim 3, wherein said predetermined threshold comprises five.

4.8. The method according to Claim 1, wherein said step of analyzing an access response message situation comprises the steps of determining the number of access response messages that are awaiting transmission and determining an age of an oldest access response message that is awaiting transmission.

9. The method according to Claim 1, wherein said step of diverting at least one paging message comprises the step of deleting said at least one paging message.

10. The method according to Claim 1, wherein said step of diverting at least one paging message comprises the step of delaying said at least one paging message.

11. The method according to Claim 10, wherein said step of delaying said at least one paging message comprises the step of delaying said at least one paging message until said access response message situation no longer meets said predetermined criterion or a predetermined period of time elapses.

12. The method according to Claim 1, wherein said step of diverting at least one paging message comprises the step of diverting a plurality of paging messages according to respective priority levels of said plurality of paging messages.

13. The method according to Claim 12, further comprising the steps of:
repeating said steps of analyzing and determining; and
diverting additional paging messages of said plurality of paging messages, said additional paging messages associated with a higher priority level.

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10. ~~14.~~ A base station enabled to provide capacity to access response messages, comprising:
- a transceiver;
 - a processor;
 - a memory; and
 - at least one logic module operatively associated with said transceiver and interrelated to at least one of said processor and said memory, said at least one logic module configured to:
- analyze a number of access response messages;
 - determine whether said number of access response messages awaiting transmission meets a predetermined criterion; and
 - if so,
- divert at least one paging message.

11. ~~16.~~ The base station according to Claim ~~14~~¹⁰, wherein said at least one logic module is further configured to determine whether said number exceeds a predetermined threshold when determining whether said access response message situation meets said predetermined criterion.

17. The base station according to Claim 16, wherein said predetermined threshold comprises five.

13. ~~21.~~ The base station according to Claim ~~14~~¹⁰, wherein said at least one logic module is further configured to determine an age of an oldest access response message that is awaiting transmission when analyzing said access response message situation.

22. The base station according to Claim 14, wherein said at least one logic module is further configured to delete said at least one paging message when diverting said at least one paging message.

23. The base station according to Claim 14, wherein said at least one logic module is further configured to delay said at least one paging message by storing said at least one paging message in said memory when diverting said at least one paging message.

24. The base station according to Claim 23, wherein said at least one logic module is further configured to delay said at least one paging message until said access response message situation no longer meets said predetermined criterion or a predetermined period of time elapses when delaying said at least one paging message.

25. The base station according to Claim 14, wherein said at least one logic module is further configured to divert a plurality of paging messages according to respective priority levels of said plurality of paging messages when diverting said at least one paging message.

26. The base station according to Claim 25, wherein said at least one logic module is further configured to:

repeat the analysis and the determination; and

divert additional paging messages of said plurality of paging messages, said additional paging messages associated with a higher priority level.

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19. 27. A method for ensuring that lower priority messages are provided a minimum bandwidth in a wireless communications system, comprising the steps of:

- providing lower priority messages and higher priority messages that share a given bandwidth;
- transmitting higher priority messages;
- determining whether a backlog of lower priority messages exists by comparing a number of backlogged lower priority messages to a predetermined overload number;
- diverting at least one higher priority message responsive to an affirmative determination that said backlog of lower priority messages exists;
- transmitting lower priority messages using bandwidth freed from said step of diverting.

28. The method according to Claim 27, wherein said lower priority messages comprise access response messages and said higher priority messages comprise paging messages.

29. The method according to Claim 27, wherein said step of determining whether a backlog of lower priority messages exists further comprises the steps of:

- comparing an age of an oldest backlogged lower priority message to a predetermined overload age.

30. The method according to Claim 27, wherein said step of diverting at least one higher priority message responsive to an affirmative determination that said backlog of lower priority messages exists comprises the step of diverting a plurality of higher priority messages in an order determined according to a selected priority ranking.

31. The method according to Claim 27, wherein said step of transmitting lower priority messages using bandwidth freed from said step of diverting comprises the step of transmitting a higher priority subset of said lower priority messages before transmitting a lower priority subset of said lower priority messages.

²⁴ 32. A method for temporarily prioritizing access response messages over paging messages, comprising the steps of:

detecting whether a control channel is overloaded by ascertaining a number of access response messages awaiting transmission for an access response channel;

regulating said control channel by reducing the bandwidth of said control channel that is consumed by a paging channel; and

transmitting at least one access response message on said access response channel.

33. A method for providing bandwidth to access response messages, comprising the steps of:

analyzing a number of access response messages;

determining whether the number of access response messages awaiting transmission meets a predetermined criterion; and

if so,

diverting at least one paging message.